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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,722	12/01/2005	Marc Stephan	175.8156USU	9734

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EXAMINER	
VAN, QUANG T	
ART UNIT	PAPER NUMBER
3742	
MAIL DATE	DELIVERY MODE
12/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,722	STEPHAN ET AL.	
	Examiner	Art Unit	
	Quang T. Van	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 22-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-31* is/are allowed.

6)☒ Claim(s) *1-10,32 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-10 and 32-33 are rejected under 35 U.S.C. 103(a) as being obvious over Holcombe et al (US 4,810,846), in view of Bhaduri et al (US 2002/0106611 A1) both previous cited.

Holcombe discloses a container for heat treating materials in microwave oven having a container (22) makes of a primary material (col. 3, line 40-47) and with a secondary material (col. 3, lines 57-68). It does not explicitly show the wavelength and the power of the microwave energy used. Bhaduri shows a microwave sintering of dental parts with a frequency of 2.45 GHz. (i. e. a wavelength of about 12.5 cm) and the power is about 1.0 – 2.5 kw (see Figures 1-14, the abstract and paragraphs [0013] and

[0032]-[0040]). It would have been obvious to an ordinary skill in the art at the time of invention to modify Holcombe to determine the exact frequency and power for microwave sintering dental parts in view of the teaching of Bhaduri through routine experimentation depending on the size and type of load to be heated in order to achieve optimal heating.

4. Claims 22-31 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the step of introducing a secondary material into an annular recess of the intermediate element so that the secondary material is surrounded by the primary material, the annular recess surrounding the receiving portion, wherein the secondary material comprises at least one material selected from the group consisting of: non-metallic materials, para-magnetic materials, ferro-magnetic materials and antiferromagnetic materials as recited in claims 22-31.

Response to Amendment

6. Applicant's arguments filed 09/08/2009 have been fully considered but they are not persuasive.

Applicants argue "one skill in the art would simply never look to modify Holcombe in view of the teachings of Bhaduri because Bhaduri is non-analogous art as to the present application" , recited in REMARKS, page 7/12 and "Bhaduri is directed to the microwave sintering of a metal part", recited in REMARKS page 8/12. This is not found persuasive. The examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Holcombe discloses substantially all features of the claimed invention as disclosed above rejection. However, it does not explicitly show the wavelength and the power of the microwave energy used. Bhaduri shows a microwave sintering of dental parts with a frequency of 2.45 GHz. (i. e. a wavelength of about 12.5 cm) and the power is about 1.0 – 2.5 kw (see Figures 1-14, the abstract and paragraphs [0013] and [0032]-[0040]). It would have been obvious to an ordinary skill in the art at the time of invention to modify Holcombe to determine the exact frequency and power for microwave sintering dental parts in view of the teaching of Bhaduri through routine experimentation depending on the size and type of load to be heated in order to achieve optimal heating. Further, Bhaduri's reference is only cited for the teaching of the wavelength and the power of the microwave energy used, other limitations are already disclosed by Holcombe. Holcombe and Bhaduri are both related to microwave heating and one ordinary skill in the art would combine these references.

Furthermore, the examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a

motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 5:00Pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang T Van/
Primary Examiner, Art Unit 3742
November 25, 2009

Quang T Van
Primary Examiner
Art Unit 3742